ZAREMBO, G.V., inzhener; ZINUROV, A.Z., inzhener.

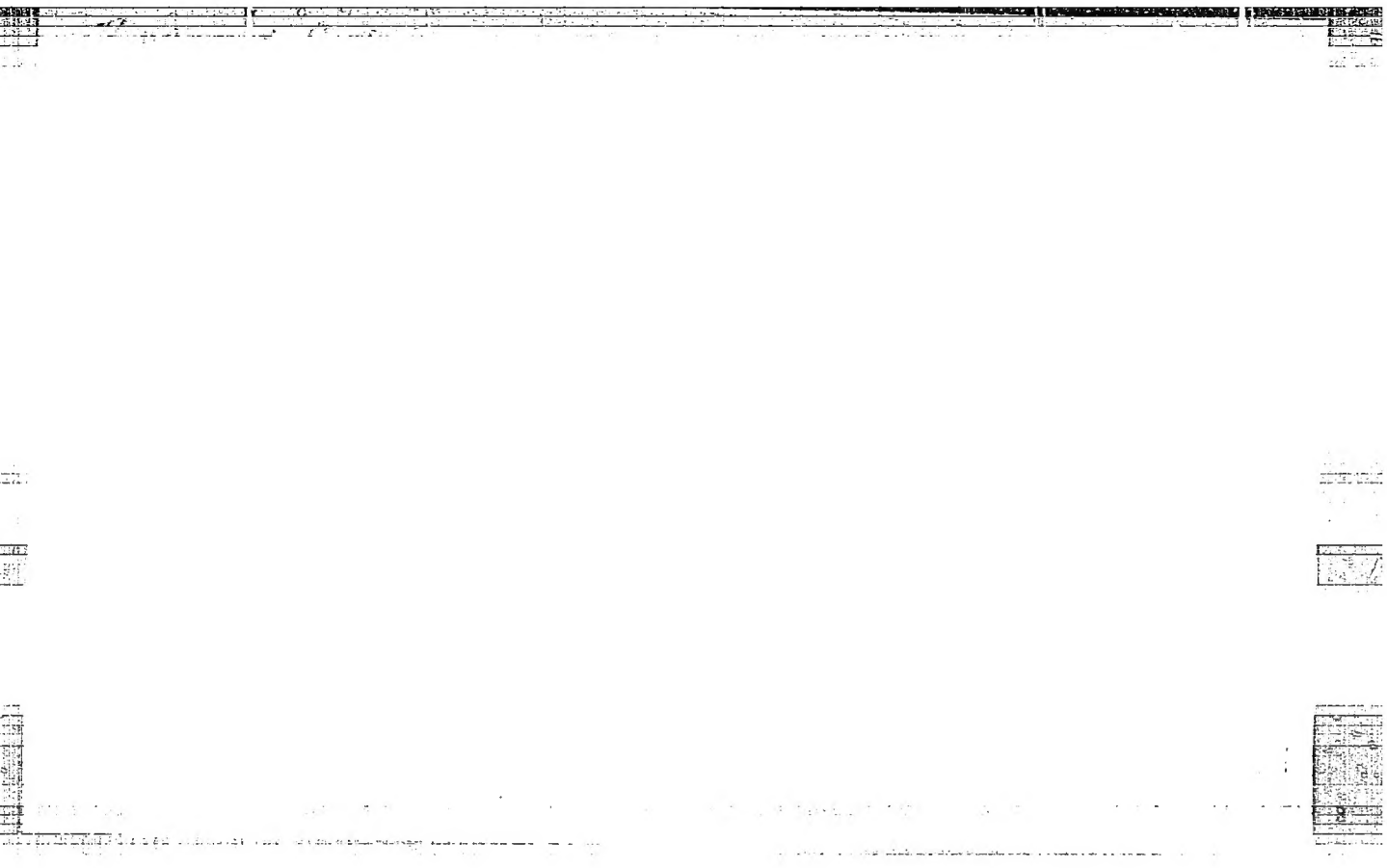
Improving the soap press. Masl.-zhir.prom.21 no.2:32-33 '56.
(MLRA 9:7)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Zarembo).2.Katta-Kurganskiy maslookstraktsionnyy zavod.
(Soap industry--Equipment and supplies)

ZAREMBO, G.V., inzhener; OGARKOV, V.S.

Using wooden bushings for intermediate bearings of worm conveyers. Masl.-zhir.prom. 21 no.3:35 '56. (MLRA 9:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Zarembo); 2. Katta-Kurganskiy MEZ (for Ogarkov).
(Conveying machinery)



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963820007-5"

ZAREBO, G.V., inzh.

Using PB-57 universal railroad cars. Masl.-zhir. prom. 23 no.12:27-28 '57. (MIRA 11:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Oilseeds--Transportation) (Railroads--Freight cars)

BUKHARIN, V.V., inzh.; KOLPAKOV, I.P., kand. tekhn. nauk; ZAREMBO, G.V., kand. tekhn. nauk; VOL'PER, I.N., inzh.

Review of A.V. Titov's book "Over-all mechanization in oil mills." Masl.-zhir. prom. 29 no.8:37-42 Ag '63. (MIRA 16:10)

ZAREMBO, G.V., inzh.; GEL'PERIN, L.A., inzh.

Redesigned MP-21 press. Masl.-zhir. prom. 28 no.10:29-31 O '62.
(MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.

ZAREMBO, G.V.; KOROLEVA, Z.S.

Magnetic characteristics for the evaluation of properties of ferromagnetic materials. Zav.lab. 29 no.3:309-312 '63. (MIRA 16:2)

(Ferromagnetism)

S/032/63/029/003/010/020
B104/B186

AUTHORS: Zarembo, G. V., and Koroleva, Z. S.

TITLE: The magnetic characteristics for evaluation of the properties of ferromagnetic materials

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 3, 1963, 309 - 312

TEXT: A list of the most important magnetic characteristics which should catalogued in the ГОСТ (GOST) and ТУ(TU) standard is given: Sheet steel used in electrical engineering (GOST 802-58): curves of magnetization and dependence of the losses on the induction at 50, 400, 500 and 1000 cps; coercive force, temperature coefficients of the characteristics between -60 and +200°C. Cold-rolled electrical steel (GOST 9925-61): same as for sheet steel. Low-carbon electrical sheet steel and rods (GOST 3836-47): the magnetic characteristics should be given for field intensities of 500, 1000, 2500, 5000, 10 000, 30 000 and 50 000 a/m. Iron-nickel alloys with high magnetic permeabilities (GOST 10 160-62; ЧМТУ 5010-55 (ChMTU 5010-55)): magnetic permeability at a field intensity of 0.1 a/m; maximum permeability; coercive force and saturation induction. Alloys for permanent magnets (GOST 9575-60, 4402-48) and barium oxide

Card 1/2

S/032/63/029/003/010/020
B104/B186

The magnetic characteristics for ...

magnets (Н0707003ТУ- N0707003TU): residual induction; coercive force; gap field intensity; magnetic moment. Ferrites with rectangular hysteresis loop: the magnetic properties should be estimated according to static and dynamic characteristics. There are 2 tables.

Card 2/2

ZAIEMBO, G.V., inzh.

Issue an airtight outlet for fat in filter presses. Masl.-zhir. prom. 26 no.1:33-34 Ja '60. (MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Oils and fats) (Filters and filtration)

ZAREMBO, G.V.

FANIYEV, G.G., inzh.; POMOGALOV, M.I., inzh.; GULI-ZADE, S.B.; YEVSEYEV, A.G.; ZAREMBO, G.V., inzh.

Automatic gravimtric proportioning of formula components for margarine at the Baku Margarine Plant. Masl.-zhir. pron. 23 no.12: 35-38 '57. (MIRA 11:2)

1. Giprozhir (for Faniyev). 2. Bakinskiy margarinovyy zavod (for Pomogalov, Guli-Zade, Yevseyev). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Zarembo).
(Baku--Margarine) (Weighting machines)

FANIYEV, G.G., inzh.; POMOGALOV, M.I., inzh.; GULI-ZADE, S.B.; YEVSEYEV, A.G.; ZAREMBO, G.V., inzh.

Automatic gravimtric proportioning of formula components for margarine at the Baku Margarine Plant. Masl.-zhir. prom. 23 no.12: 35-38 '57. (MIRA 11:2)

1. Giprozhir (for Faniyev). 2. Bakinskiy margarinovyy zavod (for Pomogalov, Guli-Zade, Yevseyev). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Zarembo).
(Baku--Margarine) (Weighting machines)

FANIYEV, G.G., insh.; POMOGALOV, M.I., insh.; GULI-ZADE, S.B.; YEVSEYEV, A.G.; ZAREMBO, G.V., insh.

Automatic gravimtric proportioning of formula components for margarine at the Baku Margarine Plant. Masl.-zhir. prom. 23 no.12: 35-38 '57. (MIRA 11:2)

1. Giprozhir (for Faniyev). 2. Bakinskiy margarinovyy zavod (for Pomogalov, Guli-Zade, Yevseyev). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Zarembo).
(Baku--Margarine) (Weighting machines)

ZARUBKO, G.V., tekhnik; GOL'YANOVA, V.V.

Increasing the life of flights in continuous screw presses.
Masl.-zhir.prom. 17 no.12:22-24 D '52. (MLRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Power presses) (Oil industries--Equipment and supplies)

ZARENBO, G.V., inzhener; POLYAKOV, P.V., inzhener.

Remote control of the motion of a gasholder vessel. Masl.-zhir.prom. 23 no.7:41-42 '57. (MLRA 10:8)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Gasholders) (Remote control)

CA

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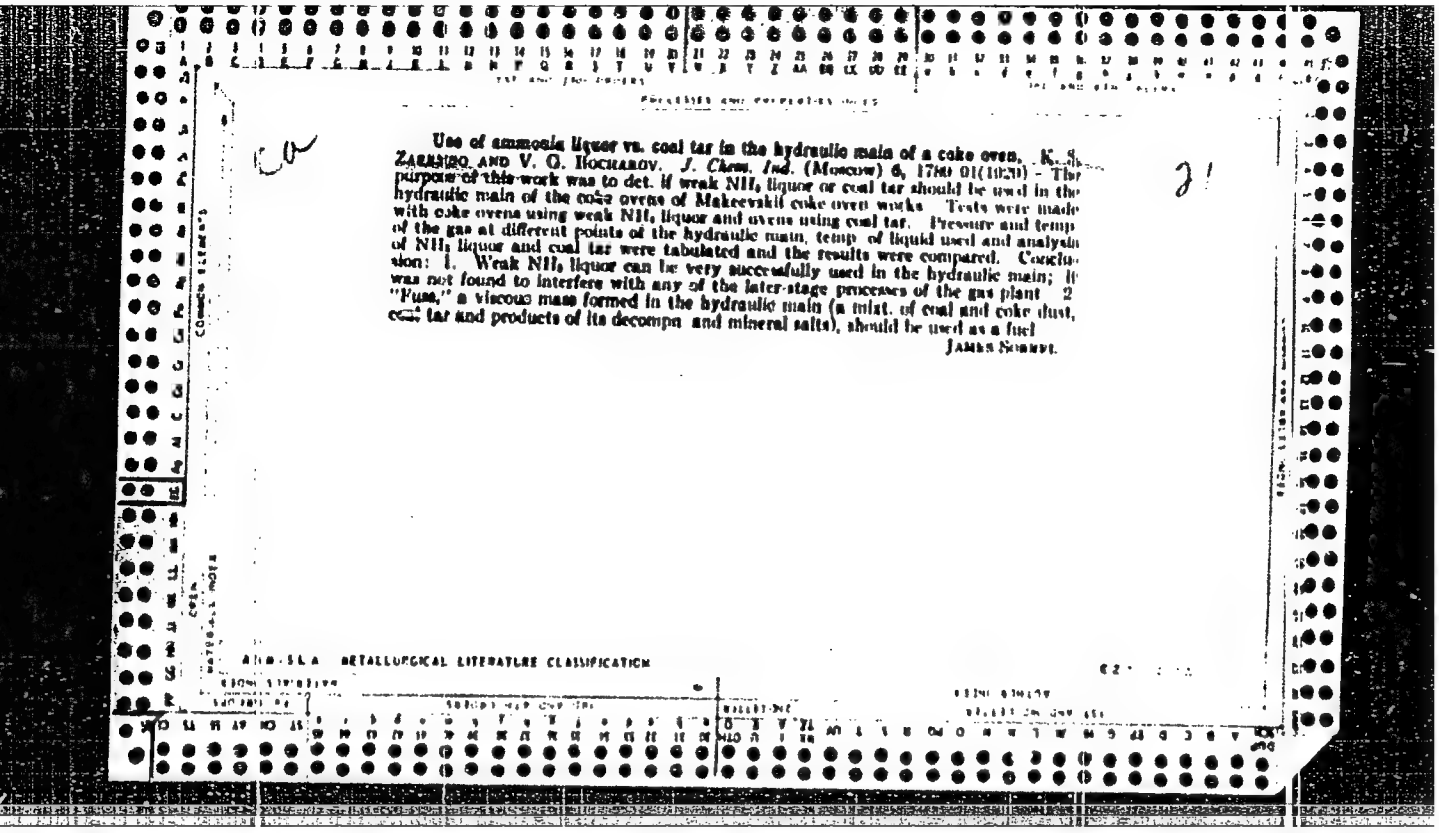
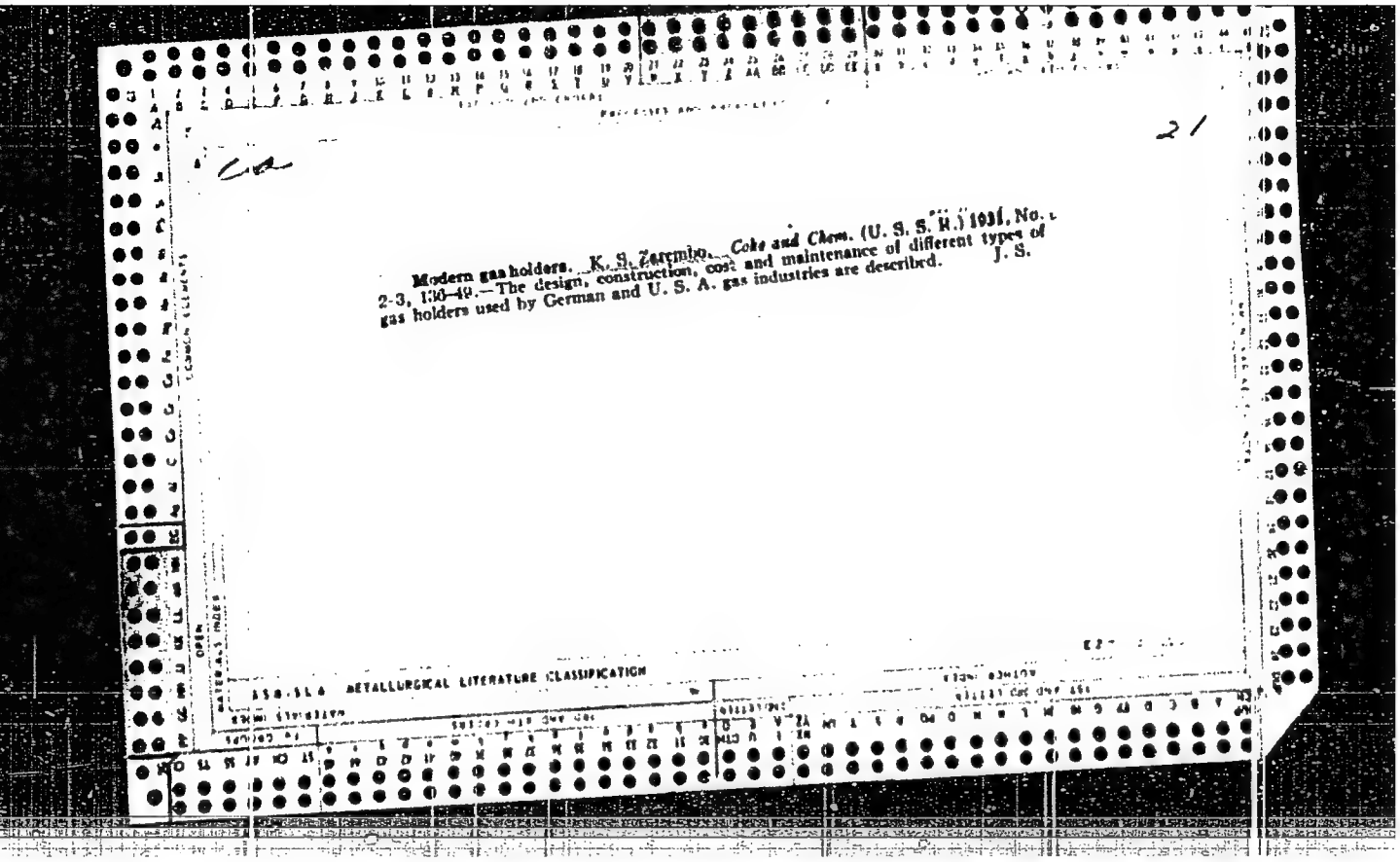
Separation of naphthalene from coke-oven gas. K. S. Zakhmid. *J. Chem. Ind.* (Russia) 6, 210-11(1929). Under the conditions prevailing in U. S. S. R. the black crude solvent naphtha obtained as a by-product in rectifying C_6H_6 is the most practicable solvent to be used in the scrubbers for naphthalene extn. The process should go on without interruption, the solvent should be artificially cooled to as low a temp. as possible and thus be freed from naphthalene crystals. Bernard Nelson

METALLURGICAL LITERATURE CLASSIFICATION

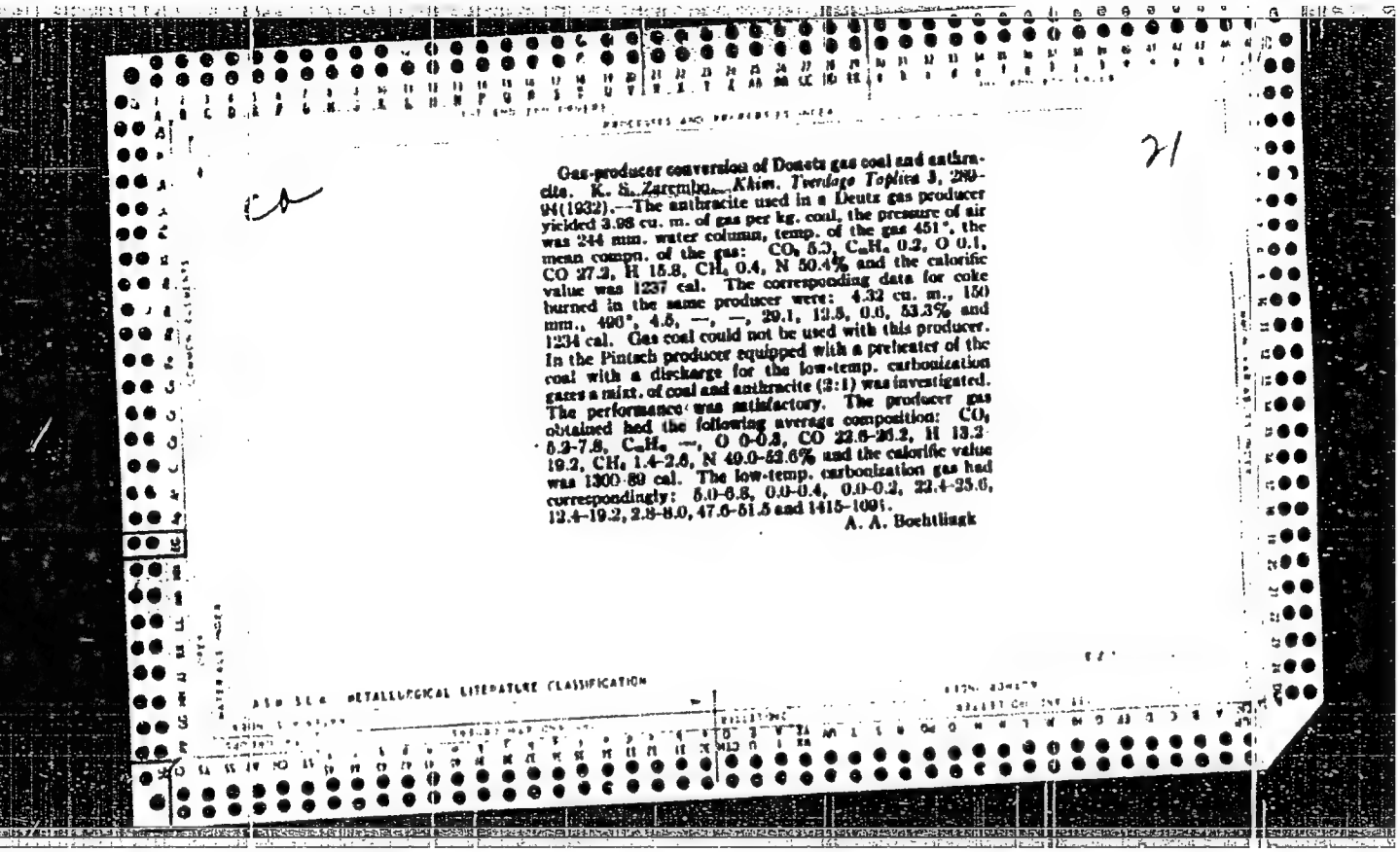


Use of ammonia liquor vs. coal tar in the hydraulic main of a coke oven. K. S. ZARAZHO AND V. G. ILOCHANOV. *J. Chem. Ind.* (Moscow) 6, 1780-91(1929). - The purpose of this work was to det. if weak NH_3 liquor or coal tar should be used in the hydraulic main of the coke ovens of Makeevskii coke oven works. Tests were made with coke ovens using weak NH_3 liquor and ovens using coal tar. Pressure and temp. of the gas at different points of the hydraulic main, temp. of liquid used and analysis of NH_3 liquor and coal tar were tabulated and the results were compared. Conclusion: 1. Weak NH_3 liquor can be very successfully used in the hydraulic main; it was not found to interfere with any of the later-stage processes of the gas plant. 2. "Pusa," a viscous mass formed in the hydraulic main (a mixt. of coal and coke dust, coal tar and products of its decompn. and mineral salts), should be used as a fuel.

JAMES SCHMIDT.

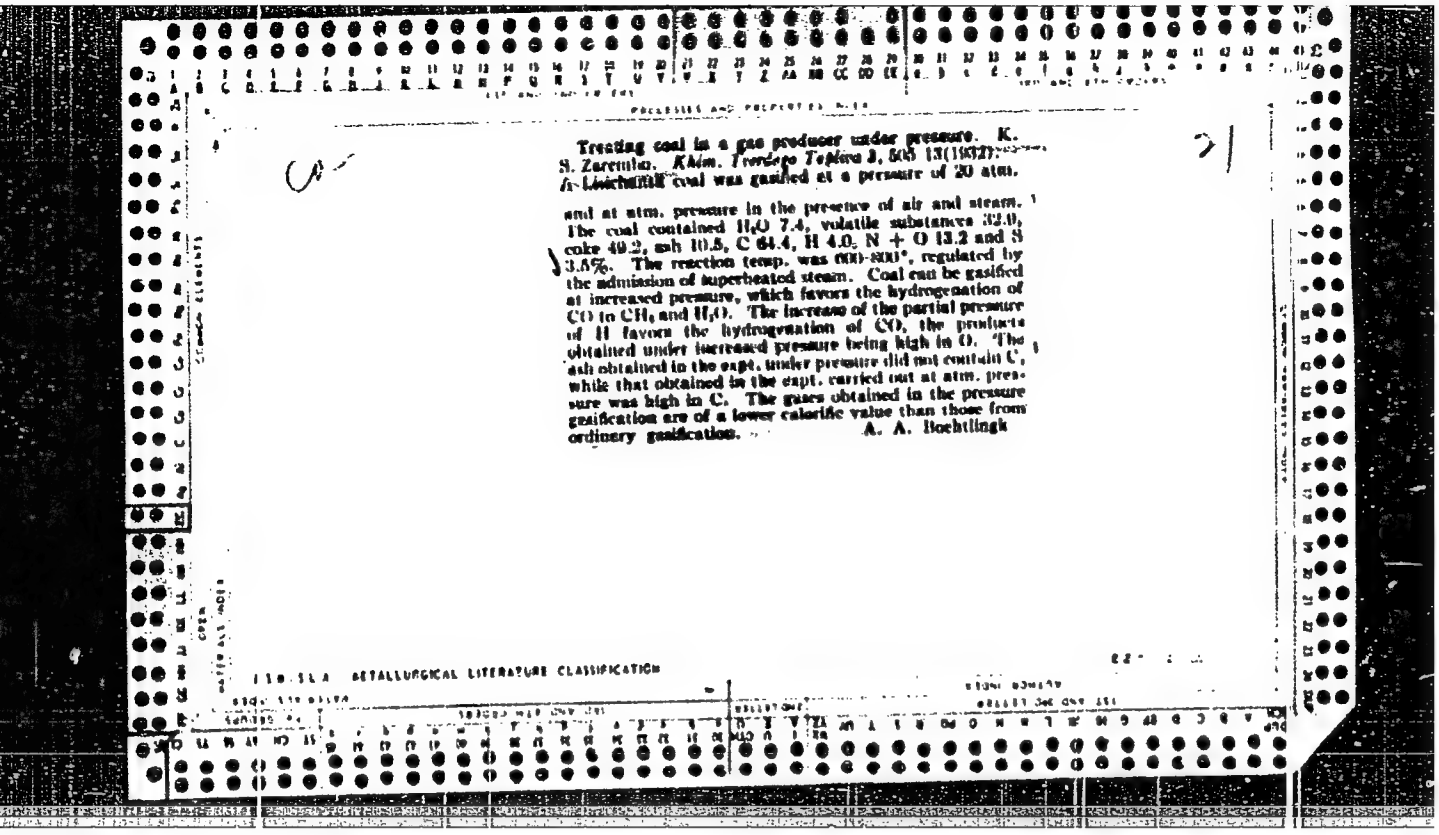


Modern gas holders. K. S. Zarmin. *Coke and Chem.* (U. S. S. R.) 1931, No. 2-3, 130–49.—The design, construction, cost and maintenance of different types of gas holders used by German and U. S. A. gas industries are described. J. S.



Gas-producer conversion of Donets gas coal and anthracite. K. S. Zaremba. *Khim. Tverdago Topliva* 3, 289-94(1932).—The anthracite used in a Deutz gas producer yielded 3.98 cu. m. of gas per kg. coal, the pressure of air was 244 mm. water column, temp. of the gas 451°, the mean compn. of the gas: CO_2 5.5, C_nH_m 0.2, O 0.1, CO 27.2, H 15.8, CH_4 0.4, N 50.4% and the calorific value was 1237 cal. The corresponding data for coke burned in the same producer were: 4.32 cu. m., 150 mm., 490°, 4.5, —, —, 29.1, 13.8, 0.0, 53.3% and 1234 cal. Gas coal could not be used with this producer. In the Pintsch producer equipped with a preheater of the coal with a discharge for the low-temp. carbonization gases a mixt. of coal and anthracite (2:1) was investigated. The performance was satisfactory. The producer gas obtained had the following average composition: CO_2 5.2-7.8, C_nH_m —, O 0-0.3, CO 22.6-26.2, H 13.2-19.2, CH_4 1.4-2.6, N 49.0-53.6% and the calorific value was 1300-89 cal. The low-temp. carbonization gas had correspondingly: 5.0-6.8, 0.0-0.4, 0.0-0.2, 22.4-25.6, 12.4-19.2, 2.8-8.0, 47.6-51.5 and 1415-1091.

A. A. Boehtlingk



Treating coal in a gas producer under pressure. K. S. Zaremba. *Khim. Tverdogo Topliva* 3, 505-13(1932): In Lisichanskii coal was gasified at a pressure of 20 atm. and at atm. pressure in the presence of air and steam. The coal contained H_2O 7.4, volatile substances 32.0, coke 49.2, ash 10.5, C 64.4, H 4.0, N + O 13.2 and S 3.5%. The reaction temp. was 600-800°, regulated by the admission of superheated steam. Coal can be gasified at increased pressure, which favors the hydrogenation of CO to CH_4 and H_2O. The increase of the partial pressure of H favors the hydrogenation of CO, the products obtained under increased pressure being high in O. The ash obtained in the expt. under pressure did not contain C, while that obtained in the expt. carried out at atm. pressure was high in C. The gases obtained in the pressure gasification are of a lower calorific value than those from ordinary gasification. A. A. Iochtlingk

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II-B-SL-A METALLURGICAL LITERATURE CLASSIFICATION

S

ZAREMBO, K

Szhatyye Goryuchiye Gazy.
(Compression of fuel gas.)
Moskva, Gostoptekhizdat, 1945.

140 P. Illus., diagrs.
"Literatura" at end of each section.

At head of title: Glavgaztopprom Pri SNK SSSR.

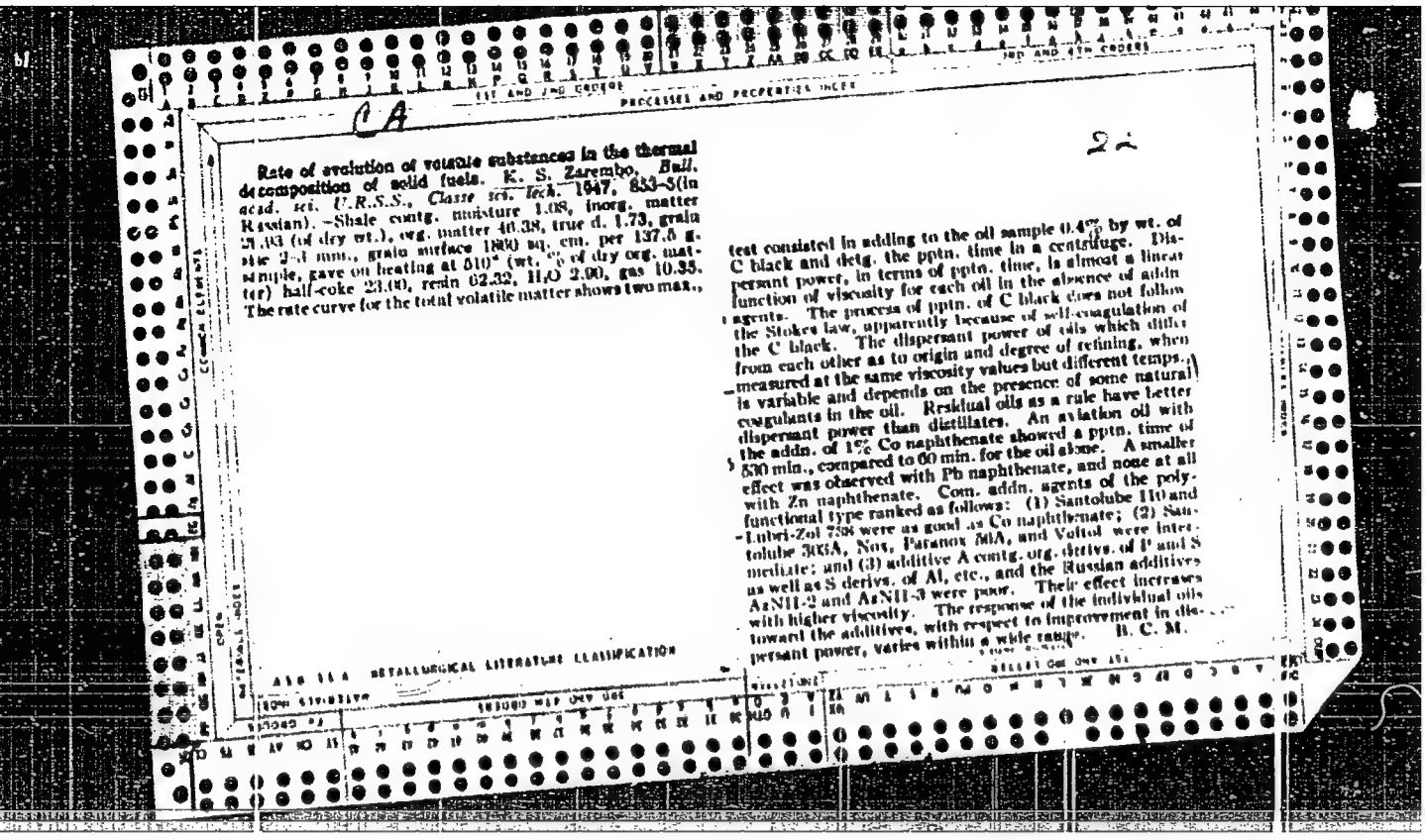
ZAREMBO, K. S.

Purifying and drying natural gas, and imparting odor to it; textbook. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1947. 152 p. (52-21692)

TP350.Z3

ZARENBO, K.S.; SHEVELEV, B.P.

Internal protection of gas pipelines with plastic coatings. (MIRA 14:12)
Trudy VNIIGAZ no.13:147-158 '61.
(Gas, Natural--Pipelines)
(Protective coatings)
(Plastics)

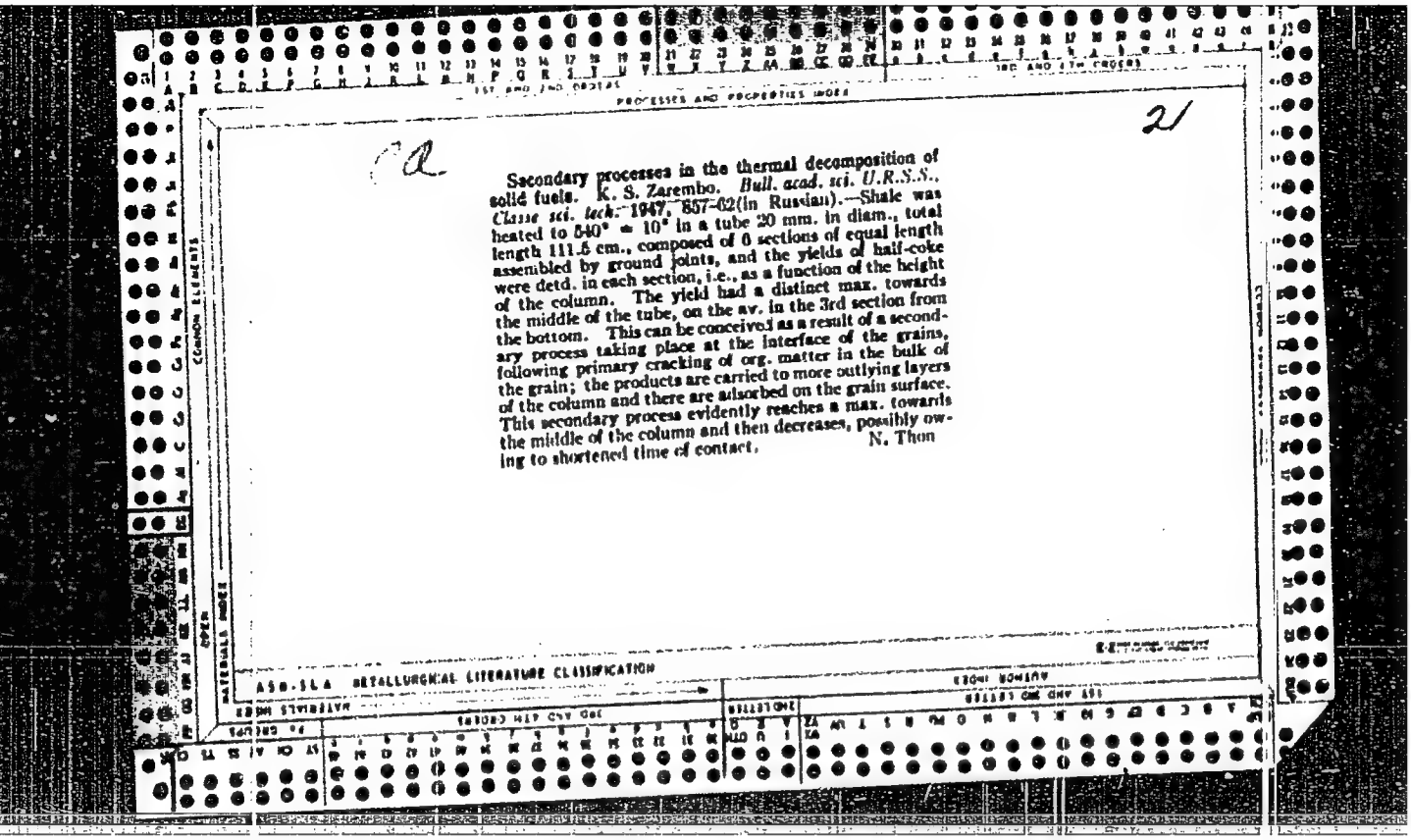


CA

Rate of evolution of volatile substances in the thermal decomposition of solid fuels. K. S. Zarembo. *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1947, 833-5(in Russian).—Shale contg. moisture 1.08, inorg. matter 57.03 (of dry wt.), org. matter 40.38, true d. 1.73, grain size 2-1 mm., grain surface 1800 sq. cm. per 137.5 g. sample, gave on heating at 510° (wt. % of dry org. matter) half-coke 23.00, resin 02.32, H_2O 2.90, gas 10.35. The rate curve for the total volatile matter shows two max.,

2

test consisted in adding to the oil sample 0.4% by wt. of C black and detg. the pptn. time in a centrifuge. Dispersant power, in terms of pptn. time, is almost a linear function of viscosity for each oil in the absence of addn. agents. The process of pptn. of C black does not follow the Stokes law, apparently because of self-coagulation of the C black. The dispersant power of oils which differ from each other as to origin and degree of refining, when measured at the same viscosity values but different temps., is variable and depends on the presence of some natural coagulants in the oil. Residual oils as a rule have better dispersant power than distillates. An aviation oil with the addn. of 1% Co naphthenate showed a pptn. time of 530 min., compared to 60 min. for the oil alone. A smaller effect was observed with Pb naphthenate, and none at all with Zn naphthenate. Com. addn. agents of the polyfunctional type ranked as follows: (1) Santolube 110 and Lubri-Zol 736 were as good as Co naphthenate; (2) Santolube 336A, Nos, Paranox 50A, and Voltol were intermediate; and (3) additive A contg. org. derivs. of P and S as well as S derivs. of Al, etc., and the Russian additives AzNII-2 and AzNII-3 were poor. Their effect increases with higher viscosity. The response of the individual oils toward the additives, with respect to improvement in dispersant power, varies within a wide range. B. C. M.



Secondary processes in the thermal decomposition of solid fuels. K. S. Zarembo. *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1947, 857-62(In Russian).—Shale was heated to 540° ± 10° in a tube 20 mm. in diam., total length 111.6 cm., composed of 6 sections of equal length assembled by ground joints, and the yields of half-coke were detd. in each section, i.e., as a function of the height of the column. The yield had a distinct max. towards the middle of the tube, on the av. in the 3rd section from the bottom. This can be conceived as a result of a secondary process taking place at the interface of the grains, following primary cracking of org. matter in the bulk of the grain; the products are carried to more outlying layers of the column and there are adsorbed on the grain surface. This secondary process evidently reaches a max. towards the middle of the column and then decreases, possibly owing to shortened time of contact.

N. Thon

USSR/Physics Apr 1948
Bunsen Burners
Combustion

"Research on the Structure of the Bunsen Burner Flame," K.S. Zarembo, Ya.B. Zel'dovich, Inst of Phys Chem, Acad Sci USSR, Moscow, 11 pp

"Zhur Fiz Khim" Vol XXII, No 4 pp 427-38

Works out method to calculate the penetration of heat into the zone of unburned gas during the combustion of gas with Bunsen burner. Also conceives method to calculate the angle of refraction of light rays, passing through the flame of Bunsen

[redacted] 67T8

USSR/Physics (Contd) Apr 1948

burner. Includes photographs, diagrams, tables, and microphotographs. Submitted 1947.

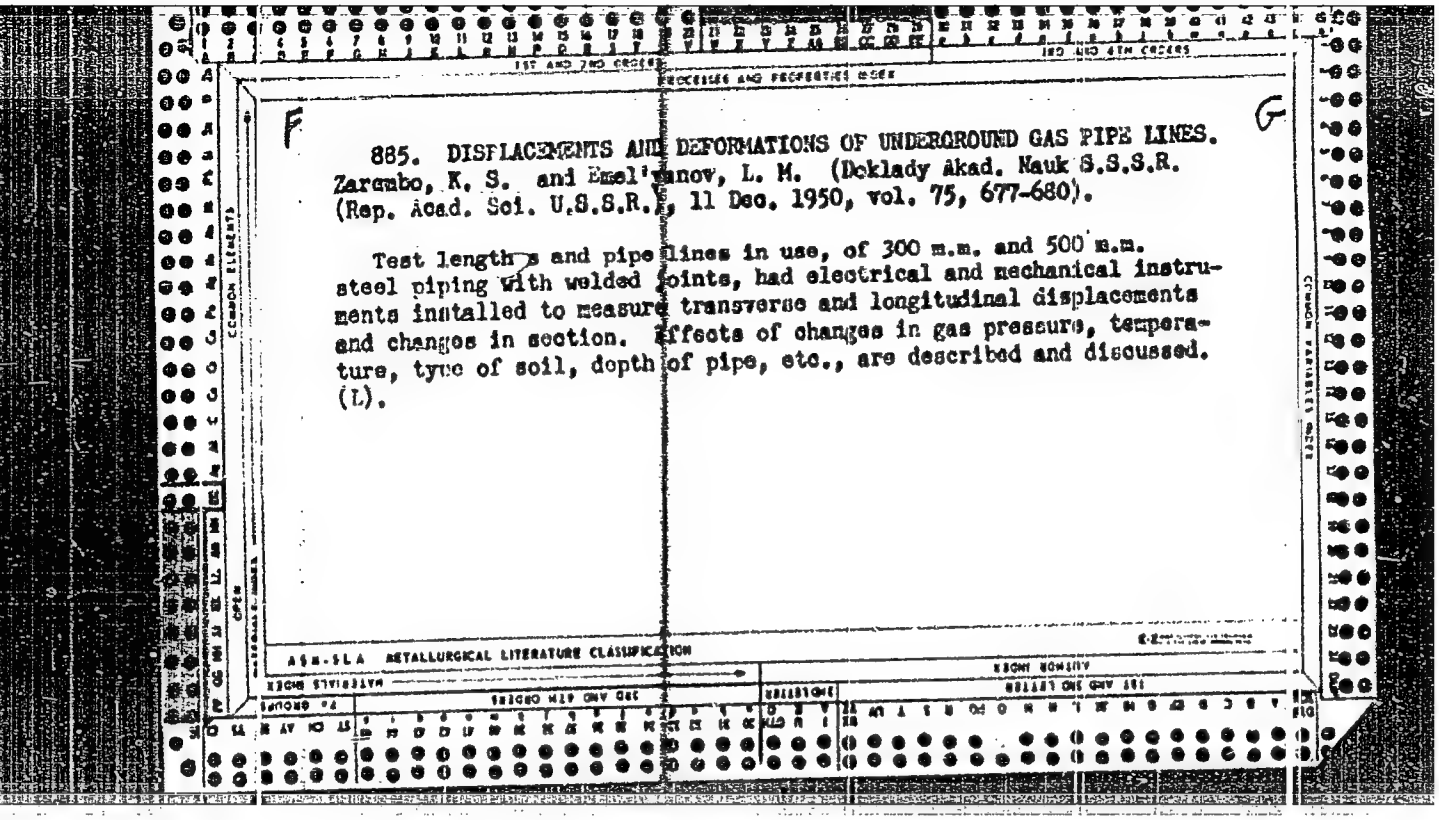
[redacted] 67T8

ZAREMBO, K.S.

ZARIMBO, K.S., dotsent, kandidat tekhnicheskikh nauk.

Concerning a Russian invention. Gor.khoz.Mosk. 24 no.4:39-40 Ap '50. (MLRA 7:10)

(Furnaces)



885. DISPLACEMENTS AND DEFORMATIONS OF UNDERGROUND GAS PIPE LINES. Zarembo, K. S. and Emel'yanov, L. M. (Doklady Akad. Nauk S.S.S.R. (Rep. Acad. Sci. U.S.S.R.), 11 Dec. 1950, vol. 75, 677-680).

Test lengths and pipe lines in use, of 300 m.m. and 500 m.m. steel piping with welded joints, had electrical and mechanical instruments installed to measure transverse and longitudinal displacements and changes in section. Effects of changes in gas pressure, temperature, type of soil, depth of pipe, etc., are described and discussed. (L).

ZAREMBO, K.S.

ZAREMBO, K.S., redaktor; YERSHOV, N.R., vedushchiy redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor

[Manual on the transportation of gases] Spravochnik po transportu gazov. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1954. 614 p. [Microfilm] (MLRA 7:9)
(Gases—Transportation)

ZAREMBO, K.S.; ZAREMBO, L.K.

Evaluating the heat effect in connection with gas pressure changes in the gas pipeline. Trudy VNII no.5:188-195 '54. (MLRA 9:1)

(Gas, Natural--Pipelines)

ZHDANOVA, N.V.;ZAREMBO, K.S.; MIKHAYLEVSKIY, P.A.; RABINOV, I.L.

Surface coating of asbestos-cement pipes to increase their gastightness. Trudy VNII no.5:196-200 '54. (MLRA 9:1)
(Gas, Natural--Pipelines)

YEFIMOV, L.I.; ZAREMBO, K.S.

Use of electric tensiometers in studying underground gas pipelines.
Trudy VNII no.5:201-204 '54. (MLRA 9:1)
(Gas, Natural--Pipelines) (Tensiometers)

ZAREMKO K. S.

Kammcialle gas mains. K. S. Zaremko. Gazovaya Prom. 1956, No. 1, 3?–3?.—Natural gas of the Second Baku region contains 2–11% H_2S, and the mains carrying this gas require replacement every 2–3 years. The 10-in. line from the compressor station to the H_2S purifier in the gasoline plant must be replaced every 2 years, and the line crossing the valley of the Belai River is renewed every 1–1.5 years.

V. H. Gottschalk

11(4) PHASE I BOOK EXPLOITATION SOV/1868

[illegible] obshchestvo neftyanoy promyshlennosti

[illegible] promyshlennosti SSSR; materialy Vsesoyuznogo soveshchaniya (Trends in the Development of the Gas Industry in the USSR; Materials Presented at the All-Union Conference) Moscow, Gostoptekhizdat, 1958. 432 p. 3,000 copies printed.

Eds: [illegible]; Exec. Eds.: [illegible]; Tech. Ed.: [illegible]; Editorial Board: [illegible] (Chief Ed.), [illegible].

PURPOSE: The book is intended for specialists engaged in the production and gathering of natural gas, the extraction of gas from coal and shale, the construction and operation of trunk gas pipelines, gas supply to cities, and the processing of gas.

COVERAGE: The authors review the basic trends in the development of the USSR gas industry, the prospecting and exploration of new gas deposits, the gasification of solid fuels, the gathering and utilization of natural gas, the automation of gas field operations, the exploitation of gas wells, and ways to increase output. They further discuss the processing of natural gas with application of refrigeration, the experience gained in the laying and operating of trunk gas pipelines, the automation of gas pipeline operation, and underground gas storage facilities. There are no references.

TABLE OF CONTENTS:

Trends in the Development of the Gas (Cont.) SOV/1868

Card 5/11

ZAREMBO, K.S.

Temperatures of underground industrial gas pipelines. Trudy VNIIGAZ no.2:172-182 '58. (MIRA 12:1)
(Gas, Natural--Pipelines)

ZAREMBO, K.S.

[redacted]

Thermal characteristics of pipeline operation in "cold sectors."
Trudy VNIIGAZ no.2:183-190 '58. (MIRA 12:1)
(Gas, Natural--Pipelines)

KUZIN, P.; CHERNYAK, L.; ZAREMBO, K.

Brief news. Gaz. prom. no.9:52-56 S '58. (MIRA 11:10)
(Gas pipes) (Petroleum industry)

ZAREMBO, K. S.

11(2) PHASE I BOOK EXPLOITATION SOV/2253

Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnykh gazov

Razrabotka i ekspluatatsiya gazovykh mestorozhdeniy, transport gaza (Development and Exploitation of Gas Fields, Transportation of Gas) Moscow, Gostoptekhizdat, 1959, 353 p. (Series: Its: Trudy, vyp. 5/13/) Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Glavnoye upravleniye gazovoy promyshlennosti pri Sovete Ministrov SSSR.

Eds.: Ye. M. Minskiy and V.N. Raaben; Exec. Ed.: M.P. Martynova; Tech. Ed.: A.S. Polosina.

PURPOSE: This collection of articles is intended for scientists, engineers, and technicians associated with the gas industry.

COVERAGE: The articles discuss the development of gas fields, natural gas recovery, gas transportation, and subsurface gas conservation. Gas field operating conditions are analyzed from the commercial point of view. The author notes that due to the specific geological conditions prevailing in the Soviet Union the application of gas extraction methods of the type used in the USA is not always advantageous. Individual articles discuss problems of the development of gas fields with narrow oil containing fringes, the theory of gas inflow, the study of gas well performance, gas filtration dynamics, and the study of gas condensates. A number of articles are devoted to the study of unstabilized gas flow in pipelines, and discuss theoretical problems connected with the performance of gas ejectors and compressors. The authors also deal with corrosion of the inner surface of gas pipelines. Conclusions made by the authors are supported by mathematical calculations. No personalities are mentioned. References accompany each article.

ZAREMBO, K., kand. tekhn. nauk

Using nonmetallic pipes for gas and oil pipelines. NTO no.6:36-37 Je '59. (MIRA 12:9)

(Pipelines)

NEGMEYEV, V.F.; ZAREMBO, K.S.; KOFANOV, K.P.; MAMEDOV. I.A.; LEGEZIN,.N.Ye.

Corrosion of the equipment used in gas condensate fields. Gaz. prom. 8 no.1:14-17 '63 (MIRA 17:7)

KHODANOVICH, I.Ye.; ZAREMBO, K.S.; SHALIMOV, B.V.; KRIVOSHEIN, B.L.

Calculation of the temperature change in a gas based on the length of the pipeline. Trudy VNIIGAZ no.21/29:43-48 '64.
(MIRA 17:9)

ZAREMBO, K.S.; PAVLOVA, N.M.

Basic characteristics of the temperature conditions in gas pipelines. Trudy VNIIGAZ no.21/29:78-86 '64.
(MIRA 17:9)

ZAREMBO, K.S.; RAABEN, V.N.

Effect of the contamination of gas on the porosity and permeability of sand. Trudy VNIIGAZ no.8:84-106 '60. (MIRA 15:5)
(Gas, Natural--Storage) (Sand--Permeability)
(Porosity)

ZARENBO, K.S.; SHEVELEV, B.P.

Protection of the inside surface of steel gas pipelines with plastic coatings. Trudy VNIIGAZ no.8:107-113 '60. (MIRA 15:5)
(Gas, Natural--Pipelines) (Protective coatings)

ZAREMBO, K.S.

Method of testing asbestos cement pipes for gas permeability.
Trudy VNIIGAZ no.8:114-123 '60. (MIRA 15:5)
(Gas, Natural—Pipelines) (Pipe, Asbestos—Cement)

ZAREMBO, K.S.; RASSADINA, Ye.N.; GORBUNOV, V.N.; SHEVELEV, B.P.

High pressure gas pipelines made of fiber glass plastic materials. Trudy VNIIGAZ no.8:124-141 '60. (MIRA 15:5)
(Gas, Natural--Pipelines) (Glass reinforced plastics)

ZAREMBO, K.S.; PAVLOVA, N.M.; TUMANOVA, A.A.

General data of using gas pipelines placed at reduced depth.
Trudy VNIIGAZ no.13:160-168 '61. (MIRA 14:12)
(Gas, Natural—Pipelines)

BOKSERMAN, Yu.I.; ZAREMBO, K.S.; SHEVELEV, B.P.

Anticorrosive insulation of the inner surface of gas pipelines.
Gaz.prom. 6 no.5:32-37 My '61. (MIRA 14:5)
(Gas, Natural--Pipelines)
(Corrosion and anticorrosives)

BAKHTIYAROV, A.S.; ZAREMBO, K.S.; RABINOV, I.L.

First experience in operating an asbestos cement, high-pressure gas pipeline. Gaz.prom. 6 no.2:39-41 '61. (MIRA 14:4)

(Gas, Natural—Pipelines)

ZAREMBO, L.K., Cand Phys-Math Sci--(diss) "On the absorption of ~~ultrasound~~ reverse waves of ~~terminal~~ finite amplitude in liquids." Mos, ~~1958~~ [Publishing House of the Acad Sci USSR], 1958. 12 p (Acad Sci USSR, Laboratory of Anisotropic Structures), 110 copies. Bibliography: pp 11-12 (KL,22-58,101)

ZAREMBO, L.K., kand. fiz.-mat. nauk; KARPOV, A.K., inzh.; LEGOSTAYEV, P.Ya., kand. tekhn. nauk; MRODSKIY, Yu.N., kand. tekhn. nauk; KHRENOV, N.S., inzh.; KHODANOVICH, I.Ye., kand. tekhn. nauk; BRISKMAN, A.A., kand. tekhn. nauk; GORODETSKIY, V.I., inzh.; NIKITIN, A.A., inzh.; GILL', B.V., inzh.; KRAYZEL'MAN, S.M., inzh.; DZHAFAROV, M.D., inzh.; LUNEV, A.S., kand. tekhn. nauk; NIKITENKO, Yo.A., inzh.; YERSHOV, I.M., kand. tekhn. nauk; ZAYTSEV, Yu.A., inzh.; MAGAZANIK, Ya.M., inzh.; SHAROVATOV, L.P., inzh.; RABINOVICH, Z.Ya., inzh.; BIBISHEV, A.V., inzh.; ASTAKHOV, V.A., dots.; KOMYAGIN, A.F., kand. tekhn. nauk; ANDERS, V.R., inzh.; SERGOVANTSEV, V.T., kand. tekhn. nauk, dots.; UTKIN, V.V., inzh.; KUZNETSOV, P.L., inzh.; MAMAYEV, M.A., inzh.; SVYATITSKAYA, K.P., ved. red.; FEDOTOVA, I.G., tekhn. red.

[Handbook on the transportation of combustible gases] Spravochnik po transportu goriuchikh gazov. Moskva, Gostoptekhizdat, 1962. 887 p. (MIRA 15:4)
(Gas, Natural--Transportation)

ZAREMBO, L.K.

USSR / Acoustics. Ultrasonics.

J-4

Abs Jour : Ref Zhur - Fizika No 3, 1957, No 7467

Author : Zarembo, L.K., Krasil'nikov, V.A., Shklovskaya-Kordi, V.V.
Inst : Laboratory of Anisotropic Structures, Academy of Sciences USSR, Moscow
Title : Distortion of Ultrasonic Waves of Finite Amplitude in Liquids.

Orig Pub : Dokl. AN SSSR, 1956, 109, No 3, 485-488

Abstract : An investigation was made of the bahavior of harmonics in a wave of finite amplitude, propagating in a liquid. The quartz radiator operated at a frequency of 1,5 Mc. The receivers were quartz plateswith resonant frequencies 1,5, 3, 4,5 Mc. The dependence of the amplitude of the acoustic pressure of the second and third harmonic on the distance to the radiator was obtained graphically for various voltages on the quartz in the following liquid media: tap water, transformer oil, and glycerin. The distortion in the shape of the sound wave and the associated appearance of harmonics in theliquid is made possible by the non-

Card : 1/2

ZAREMBO, L. K.

USSR/Liquids and Amorphous Bodies. Gases B-6

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22208

Author : L. K. Zarembo, V. A. Krasilnikov, V. V. Shklovskaya-Kordi.
Inst : Not given
Title : The absorption of ultra-sonic end range waves in liquids.

Orig Pub : Dokl. AN USSR, 1956, 109, No 4, 731-734

Abstract : The absorption of end range waves with basic frequencies (under 4 m hertz was studied in order to clarify reasons of dependence of ultrasound absorption coefficient α in liquids on intensity (Fox F. E. Nuovo Cimento. 1951, 7, ser. IX. Suppl. No 2, 198). It was established that a 2 degree increase of $|\alpha|$ at intensities - 4 vt/cm^2, when compared with α computed at small amplitudes, takes place in ethyl and methyl alcohols and in toluene, in a lesser degree - in distilled water, and in insignificant degree - in viscous liquids: transformer oil and glycerine. The values of $|\alpha|$ conform well for acetic and formic acids at intensities $\sim$1vt/cm^2 with former measurements (Bazhulin P. A. ZH experim. teoret. fiziki, 1938, 8, No 4, 451). Absorption measurements at increased static pressures were conducted in order to find out the influence of cavita-

Card 1/2

USSR/Liquids and Amorphous Bodies. Gases B-6

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22208

tion. No difference was discovered between absorption in methyl alcohol at an excess pressure of 15Kg/cm^2 and at no excess pressure at all; in case of water from a water-supply system this difference lies within limits of measurements errors and so it seems that an important absorption increase does not depend on a developed cavitation. A qualitative realization is noted of following rules of Fox and Walles' theory, which binds end waves absorption with deformation of wave shape in process of spreading, and with appearance in connection with that of harmonic curves: 1) a relative increase of α is proportional to the acoustic pressure, and 2) relative increase of α is bigger for liquids having a small α_0 than for those with a big α_0. Authors are arriving to the conclusion that the increase of α cannot be exclusively referred to the deformation of the wave shape: acoustic currents could have an important effect too. Middle intensity was measured by the thermal method (error $<$ 20%) on 1.5 MHz frequency.

Card 2/2

AUTHOR: Zarembo, L.K., Krasilnikov, V.A. and Shklovskaya-Kordi, V.V.

TITLE: Propagation of ultra-sonic waves of finite amplitude in liquids. (O rasprostranenii ultrazvukovykh voln konechnoy amplitudy v zhidkostyakh.)

PERIODICAL: "Akusticheskiy Zhurnal" (Journal of Acoustics), 1957, Vol. III, No. 1, pp. 29 - 36 (U.S.S.R.) 46-1-4/20

ABSTRACT: Non-linear properties of liquids have been directly proved by Mikhaylov 1) from the "mixing" effect of two ultra-sonic waves, by Gorelik, A.G. and Zverev, 2), who achieved amplitude and phase modulation of ultra-sonics by sound, by Loeber and Hidemann, 3), who observed by optical method the distortion of standing waves in liquids and by the authors of the present article in one of their earlier works, 4), in which they observed harmonics of a wave with finite amplitude propagated in a liquid. These non-linear properties of liquids govern the wave propagation in liquids. It can be said that the greater the amplitude the greater would be the coefficient of absorption; the fact observed by Eykhenvald, A.A. 5), during experiments to confirm the investigations by Neklepayev, N. of ultra-sound absorption in air. In the present article, results of experimental determination of the absorption coefficient, of a wave with finite amplitude in various liquids, as a function of the sound intensity (with a fundamental of 1.5 Mc/s)

Card 1/3

Propagation of ultra-sonic waves of finite amplitude in liquids. (Cont.)

46-1-4/20

ASSOCIATION: Laboratory of Anisotropic Structures, Academy of Sciences, U.S.S.R. (Laboratoriya anizotropnykh struktur AN SSSR, Moskva.)

SUBMITTED: April 21, 1956.

AVAILABLE:

Card 3/3

ZAREMBO, L.K.

AUTHOR: Zarembo, L.K. 46-2-9/23

TITLE: Temperature dependence of finite amplitude waves absorption in viscous fluids. (K voprosu o temperaturnoy zavisimosti pogloshcheniya voln konechnoy amplitudy v vyazkikh zhidkostyakh)

PERIODICAL: "Akusticheskiy Zhurnal" (Journal of Acoustics), 1957, Vol.3, No.2, pp. 163-164 (U.S.S.R.)

ABSTRACT: The author has measured the absorption coefficient of finite amplitude waves in transformer oil. The temperature dependence of the oil shear viscosity has been determined using the Heppler viscosimeter. The oil density has been found to decrease linearly from 0.89 g/cm^3 at 17.5 C to 0.865 g/cm^3 at 72.5 C. The sound velocity propagation in 10 - 70 C temperature range, according to V.P. Sizov, varies in transformer oil by not more than 10% at 1.5 Mc/s. The absorption has been measured at constant voltage 2kV, using a 5 cm diameter quartz converter, with silver electrodes of 3.7 cm diameter. The converter was working at the fundamental frequency of 1.5 Mc/s, The ultrasonic receiver consisted of a multiple thermocouple arrangement (2) with sensitivity constant within 20% for 1.5 - 4.5 Mc/s frequency range. Results obtained have shown that, though the viscous shear in

Card 1/2

Temperature dependence of finite amplitude waves absorption in viscous fluids. (Cont.)

the temperature range 18.5 - 67.3 C decreases five times, the absorption of finite amplitude waves increases, which indirectly proves the influence of harmonics on absorption.

There are 2 graphs and 1 table of results, and 5 references, 3 of which are Slavic.

ASSOCIATION: Laboratory for Anisotropic Structures Ac.Sc.USSR, Moscow. (Laboratoriya Anizotropnykh Struktur AN SSSR Moskva)

SUBMITTED: September 11, 1956.

AVAILABLE: Library of Congress

Card 2/2

ZAREMBO, L.K.

46-4-14/17

AUTHORS: Zarembo, L.K. and Shklovskaya-Kordi, V.V.

TITLE: A Method of Visualisation of Acoustic Flow on the Interface between Two Immiscible Liquids (Metod **vizualizatsii** akusticheskogo techeniya na granitse dvukh nesmeshivayushchikhsya zhidkostey)

PERIODICAL: Akusticheskiy Zhurnal, 1957, Vol.III, Nr 4, pp.373-374 (USSR)

ABSTRACT: A simple method of visualisation of lines of flow is described. A plexiglass vessel (20 x 20 x 20 cm) was covered with a silencer at one end and half-filled with glycerine and then filled up with vaseline oil. The interface between the two liquids was on the axis of a quartz radiator working on a frequency of 5 Mc/s. A coloured water drop is let into the vaseline oil and falls through it until it reaches the interface and spreads out to form a thin coloured film. The film moves along the flow lines, and a flow line pattern can be clearly seen and photographed. A figure showing the pattern as a function of time is shown on p.373. N. A. Marov and L. I. Odintsov are thanked for their assistance. There is 1 figure.

Card 1/2

46-4-14/17

A Method of Visualization of Acoustic Flow on the Interface between Two Immiscible Liquids.

ASSOCIATION: Laboratory for Anisotropic Structures, Academy of Sciences of the USSR (Laboratoriya anizotropnykh struktur AN SSSR)

SUBMITTED: May 25, 1957.

AVAILABLE: Library of Congress.

Card 2/2 1. Acoustic flow-Determination

ZAREMBO, L. K.

"The Absorption of Ultrasound Waves of Finite Amplitude."

report presented at the 6th Sci. Conference on the Application of Ultrasound in the Investigation of Matter, 3-7 Feb 1958, organized by Min. of Education RSFSR and Moscow Oblast Pedagogic Inst. im N. K. Krupskaya.

BUROV, V. A., ZAREMBO, L. K., KHASILNIKOV, V. A. and SHKLOVSKAYA-KORDY, V. V.

"Some Problems on the Propagation of Waves of Finite Amplitude in Liquids."

paper presented at the 4th All-Union Conf. on Acoustics, Moscow, 26 May - 6 Jun 58.

SOV/115-58-5-30/36

AUTHOR: Zarembo, L.K.

TITLE: Thermo-Electric Ultra-Sonic Receivers (O termoelektricheskikh priyemnikakh ultrazvuka)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 5, pp 74-77 (USSR)

ABSTRACT: The principles of thermo-electric converters, which are used in ultra-sonic measurements, consists in converting acoustic energy into heat. The temperature variations are measured with a thermoelement. The thermo-electric receivers were used for measurements in liquids, from a few hundred kilocycles to several megacycles. This does not exclude the possibility of using lower frequencies. For a thermo-electric receiver there are two working regimes: 1) Manipulation regime (work with brief exposition on the straight-line segment of the thermal characteristic curve) which is determined by the maximum intensity of the ultra-sonics, which are being used. 2) The uninterrupted form, in which thermal equilibrium is achieved. In both cases the devi-

Card 1/3

Thermo-Electric Ultra-Sonic Receivers

ation of the galvanometer must be proportional to the intensity. The paper then describes the construction of thermo-electric receivers, which were used to measure the absorption of ultra-short waves in liquids, and to test the heterogeneity of the more direct field of a flat quartz plate. These receivers are thermo-electric receivers with copper-constantan thermoelements which have a thermal power of 41×10^{-6} v/degree, and are linear in the range 0-100°C. These thermal receivers were used to test intensity distribution in heterogenous more directly situated fields. As an example, the author gives a measurement - with such a receiver and an M 91 a galvanometer of intensity distribution at a range of 2 mm - of a flat quartz plate with $\varnothing$ = 5 cm and a cross section of silver electrodes of 3.67 cm with a basic frequency of 1.5 Mc. A comparison of thermal characteristics shows that the sensitivity of the thermal receiver in oil is about twice as great as in water. The paper also makes some remarks on the theory of the thermo-electric receiver which has a

Thermo-Electric Ultra-Sonic Receivers

number of advantages in comparison with other types of acoustic receivers: 1) The receiver does not have resonance areas; 2) It has a greater inertia; 3) These receivers are intensity receivers, i.e. they measure a quantity which is especially interesting in many cases. The defects of these receivers are; 1) Considerable time loss between two measurements; 2) The question of the working expostion, in work in manipulation form in liquids with various coefficients of thermal conduction where the equations must be solved separately for each liquid. There are 3 graphs, 1 photograph and 4 references, 2 of which are Soviet and 2 English.

Zarembo, L.K.

USSR

1. Following are titles and authors of some of the papers to be presented at subject Congress:

USSR

ANAN'YEVA, A. A., Acoustics Institute, USSR Academy of Sciences, Moscow - "Barium-titanate cylindrical transducer radiating along the axis"

ANDREYEV, N. N., Acoustics Institute, USSR Academy of Sciences, Moscow - "Some questions of non-linear acoustics"

BALYAN, S. A., and KUDRYAVTSEV, B. B., Laboratory for Molecular Acoustics, Moscow Oblast Institute for Pedagogics - "Sound dispersion in a liquid mixture, the components of which form a chemical compound"

CHISTOVICH, L., Pavlov Institute of Physiology, USSR Academy of Sciences, Leningrad - "Mutual masking of clicks following in rapid succession and their loudness discrimination"

GERSHUNI, Grigoriy V., Pavlov Institute of Physiology, USSR Academy of Sciences, Leningrad - "On the regulation of characteristics of the auditory system"

GOL'TSENG, O. A., Acoustics Institute, USSR Academy of Sciences, Moscow - "On the statistical reverberation theory"

GOLYAMINA, I. P., Acoustics Institute, USSR Academy of Sciences, Moscow - "Study of magnetically exact sound transformers from ferrites"

GURVICH, A. S., Institute of Physics of the Atmosphere, USSR Academy of Sciences, Moscow - "Acoustic microanemometer"

ILYASHUK, Yu. M., Laboratory for Combating Noise, Institute for Labor Protection, Leningrad - "Study of the dynamic characteristics of noise measurement devices and problems of standardizing them"

KALLISTRATOVA, M. A., Institute of Physics of the Atmosphere, USSR Academy of Sciences, Moscow - "Experimental investigation of sound scattering in the atmosphere"

KRASIL'NIKOV, V. A., and ZAREMBO, L. K., Acoustics Institute, USSR Academy of Sciences, Moscow - "Some questions of non-linear acoustics in liquids"

KUDRYAVTSEV, B. B., Laboratory for Molecular Acoustics, Moscow Oblast Institute for Pedagogics - "Sound dispersion in liquids"

Excerpts from the Program and Information Circular, reports to be submitted for the Third Intl. Congress on Acoustics, IUPAP, Stuttgart, GFR, 1-8 Sep 1959.

24(1)

AUTHORS: Zarembo, L. K., Krasil'nikov, V. A. SOV/53-68-4-5/12

TITLE: Some Problems of the Propagation of Ultrasonic Waves of Finite Amplitudes in Liquids (Nekotoryye voprosy rasprostraneniya ul'trazvukovykh voln konechnoy amplitudy v zhidkostyakh)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 68, Nr 4, pp 687-715 (USSR)

ABSTRACT: The authors give a survey of the distortion- and absorption effects of ultrasonic waves of finite amplitude in liquids, special weight being laid upon the distortion in dissipative media and the hereby caused increase in absorption. In the introduction several general problems, especially the nonlinear processes, are discussed. In the following chapter the theory of the distortion and absorption of waves of finite amplitudes is explained, first of all for non-dissipative, and later for dissipative media. In a table data are given for a number of liquids, which were calculated by different methods. The following chapter 3 deals with experimental methods of determining nonlinear dissipation as well as with qualitative comparisons between experimental and theoretical results. First, the method and some experiments carried out for the purpose of investigating the influence of nonlinearity upon the

Card 1/3

propagation of ultrasonic waves in liquids are discussed (Fig 2), and later the propagation of the harmonics is dealt with. Figure 3a in a diagram shows the variation of the second harmonic depending upon the distance from the sound source in water as well as in transformer oil; figure 3b shows the course of these curves for the third harmonic in water. Further investigations of the wave shape (Burov et al., Naugol'nykh et al.)(Fig 4) are discussed. Figure 5 shows the spectrum of the blue Hg-line (4358 Å), diffracted on a sound wave (583 kilocycles) in distilled water, 5 cm distant from the sound source. Figure 6 shows the scheme of an optical device for the observation of the distorted form of the wave, figure 7 shows the propagation of light intensity (diagram) under certain conditions. Figure 8 finally shows recordings of a diffraction of light on a distorted wave and on the harmonics. The single experiments and their results are discussed. This chapter ends with a discussion of the analysis of the harmonics (Fig 9). The next chapter deals with the absorption of waves of finite amplitudes in liquids. Again methods, experiments, and their results are described, and several characteristic curves are

shown in form of diagrams (temperature dependence of α/ν , dependence of the relative absorption coefficient in water on the acoustic Reynolds number, the same for methyl alcohol; table 2 gives data concerning absorption in transformer oil). The paper ends with a short discussion. There are 13 figures, 2 tables, and 46 references, 30 of which are Soviet.

ZAREMBO, L.K.

45

PHASE I BOOK EXPLOITATION SOV/5644

Vsesoyuznaya konferentsiya professorov i prepodavateley pedagogicheskikh institutov

Primeneniye ul'traakustiki k issledovaniyu veshchestva. vyp. 10. (Utilization of Ultrasonics for the Investigation of Materials. no. 10) Moscow, Izd-vo MOPI, 1960. 321 p. 1000 copies printed.

Eds.: V. F. Nozdrev, Professor, and B. D. Kudryavtsev, Professor.

PURPOSE: This book is intended for physicists and engineers interested in ultrasonic engineering.

COVERAGE: The collection of articles reviews present-day research in the application of ultrasound in medicine, chemistry, physics, metallurgy, ceramics, petroleum and mining engineering, defectoscopy, and other fields. No personalities are mentioned. References accompany individual articles.

Card 1/10

AVAILABLE: Library of Congress (QC 244. V82 1960)

Card 10/10

JA/rsm/jk
1/5/62

KRASIL'NIKOV, Vladimir Aleksandrovich; ZAREMBO, L.K., red.; YERMAKOVA, Ye.A., tekhn.red.

[Sonic and ultrasonic waves in air, water, and solid bodies] Zvukovye i ul'trazvukovye volny v vozdukhe, vode i tverdykh telakh. Izd.3., perer. i dop. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1960. 560 p. (MIRA 13:5)
(Sound waves) (Ultrasonic waves)

ZAREMBO, L.K.

One method for determining the front width of an acoustic wave of a nearly saw-toothed form. Akust.zhur. 6 no.1:43-46 '60. (MIRA 14:5)

1. Akusticheskiy institut AN SSSR, Moskva.
(Sound waves)

81372
S/046/60/006/01/07/033
B008/B011

24.1800

AUTHORS: Zarembo, L. K., Shklovskaya-Kordi, V. V.

TITLE: On the Problem of the Propagation Rate of Ultrasonic Waves of Finite Amplitude in a Liquid

PERIODICAL: Akusticheskiy zhurnal, 1960, Vol. 6, No. 1, pp. 47 - 51

TEXT: The authors investigated the propagation rate of the zeros of a wave of finite amplitude in aqueous methyl alcohol solution with a temperature coefficient of velocity amounting to $\sim 10^{-3}$ grad^{-1}, as well as in water by the phase method. Such points of the sound wave were designated as zeros in the work under review (Fig. 1), whose amplitude is equal to zero, viz. whose state does not differ from the one in the undisturbed medium (the distance between the zeros being equal to λ). The scheme of the experimental setup is illustrated in Fig. 2. The change in velocity was determined with a maximum accuracy of 0.003%. On a change of the voltage at the quartz from 100 v to 1.5 kv, a considerable rise (of the order of 100 m/sec) was observed in the propagation rate. In this case, the phase change with time occurred discontinuously (Fig. 3).

81372

On the Problem of the Propagation Rate of Ultrasonic Waves of Finite Amplitude in a Liquid

S/046/60/006/01/07/033
B008/B011

This rise in velocity arises at a certain section and is probably basically related to secondary cavitation effects. Measurements in a tube under constant overpressure ($\sim$1 atmosphere) showed with an accuracy of $\sim 7 \cdot 10^{-3}$% that the propagation rate of the zeros of a wave of finite amplitude of vibration with Reynolds numbers $\sim$10 and Mach numbers $\sim 4 \cdot 10^{-4}$ remains constant. The authors thank V. A. Krasil'nikov, M. A. Isakovich for their useful advice, and Engineer K. L. Gurdin for their assembling and adjusting of the phasometer. There are 3 figures and 10 references: 8 Soviet and 2 American.

ASSOCIATION: Akusticheskiy institut AN SSSR, Moskva
(Institute of Acoustics, AS USSR, Moscow)

SUBMITTED: July 28, 1959

Card 2/2

ZAREMBO, L.K.

Nonlinear distortion of a plane wave in a nondissipative medium.
Akust.zhur. 7 no.2:189-194 '61. (MIRA 14:7)

1. Akusticheskiy institut AN SSSR, Moskva.
(Sound waves)

S/188/62/000/003/012/012
B104/B112

AUTHORS: Gedroyts, A. A., Zarembo, L. K., Krasil'nikov, V. A.

TITLE: Elastic waves with finite amplitudes in solids and lattice unharmonicity

PERIODICAL: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 3, 1962, 92-93

TEXT: The calculation of γ/β by reference to the Born model of a solid is discussed. γ is the "mean" nonlinear coefficient, represented as a linear combination of all nonlinear coefficients in Hooke's law; β is the linear coefficient in Hooke's law. Deviations from this law are due to the nonlinearity of forces exerted by the ions within an ion crystal upon one definite ion. The larger the coefficient of thermal expansion the greater is the nonlinearity of Hooke's law. The deviation from nonlinearity is chiefly due to intercrystalline interaction. The effects of polycrystallicity, crystal defects, etc on Hooke's law are still unexplained.

ASSOCIATION: Kafedra akustiki (Department of Acoustics)
SUBMITTED: March 19, 1962
Card 1/1

GUN SYU-FEN' [Kung Hsiu-fen]; ZAREMBO, L.K.; KRASIL'NIKOV, V.A.

Measurement of the acoustic nonlinear parameter of liquid nitrogen. Akust. zhur. 9 no.3:382-383 '63. (MIRA 16:8)

1. Kafedra akustiki Moskovskogo gosudarstvennogo universiteta.
(Liquid nitrogen—Acoustic properties)

L 10837-63

ACCESSION NR: AP3000742 S/0020/63/150/003/0515/0518

AUTHOR: Gedroyts, A. A.; Zarembo, L. K.; Krasil'nikov, V. A. 44

TITLE: Shear waves of finite amplitude in poly- and single metallic crystals

SOURCE: AN SSSR. Doklady, v. 150, no. 3, 1963, 515-518

TOPIC TAGS: transversal waves, ultrasonics, Hooke's law, longitudinal ultrasonic waves, magnesium-aluminum alloy MA-8, aluminum, duraluminum, zinc, cadmium, shear nonlinearity

ABSTRACT: In several previous papers the authors have investigated the nonlinear distortion of longitudinal ultrasonic waves (deviation from Hooke's law). The present paper deals with the nonlinear distortions in the shear wave which are much smaller. The experimental work was done on polycrystalline metals (magnesium-aluminum alloy MA-8, aluminum, and duraluminum) and on single crystals of aluminum, zinc, and cadmium. The distortion was observed by the appearance of a second harmonic. For detection, the usual ultrasonic equipment was used. Effects of small load and short heating are described. It was found that the shear nonlinearity in single crystals is very sensitive to small loads and to heating. It is believed that this sensitivity is partly due to dislocations. Orig. art. has: 2 figures.

Card 1/1

Moscow State University

ACC NR: AM7000694 Monograph UR/

Zarembo, Lev Konstantinovich; Krasil'nikov, Vladimir Aleksandrovich

Introduction to nonlinear acoustics; sound and ultrasonic waves of high intensity (Vvedeniye v nelineynuyu akustiku; zvukovyye i ul'trazvukovyye volny bol'shoy intensivnosti) Moscow, Izd-vo "Nauka," 1966. 519 p. illus., biblio. Errata slip inserted. 5,000 copies printed.

TOPIC TAGS: acoustics; sound; sound propagation; ultrasonic wave; ultrasonic wave propagation; cavitation

PURPOSE AND COVERAGE: This book is said to represent the first attempt at a generalization of a large quantity of work in nonlinear acoustics. The book is intended for students of higher courses at universities and for aspirants, engineers, and physicists working in the field of acoustics and hydroacoustics, hydrodynamics, the theory of elasticity, and solid state physics. References are given with each chapter.

TABLE OF CONTENTS [Abridged]:

Card 1/2 UDC: 534.0

ACC NR: AM7000694

SUB:CODE: 20/ SUBM DATE: 14Jul66/ ORIG REF: 158/ OTH REF: 89/

Card 2/2

ACCESSION NR: AP5016552 UR/0056/65/048/006/1598/1603

AUTHORS: Kun, Hsiu-fen; Zarembo, L.K.; Krasil'nikov, V.A.

TITLE: Experimental investigation of combination scattering of sound by sound in solids

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 6, 1965, 1598-1603

TOPIC TAGS: acoustic scattering, combination scattering, acoustic wave, longitudinal wave, transverse wave

ABSTRACT: This is an elaboration of a short preliminary communication (Akust. zh. v. 11, 112, 1965) reporting an experimental study of the scattering of a transverse wave by a transverse wave of the same frequency, in which case a longitudinal wave of double frequency is obtained. The present article presents more detailed results obtained in polycrystalline aluminum. The interactions studied were

Card 1/2

[redacted]

[redacted] ...ation of two transverse waves, a ...gitudinal wave

[redacted] University

SUBMITTED: 23Jan65 ENCL: 00 SUB CODE: GP

NR REF GOV: 005 OTHER: 004

Card 2/2

GUN SYU-FEN' [Kung Hsiu-fen]; ZAREMBO, L.K.; KRASIL'NIKOV, V.A.

Nonlinear interaction of elastic waves in solids. Akust. zhur. 11 no.1:112-115 '65. (MIRA 18:4)

1. Kafedra akustiki Moskovskogo gosudarstvennogo universiteta.

BELEN'KIY, M.S.; ZAREMBO, L.S. (Odessa)

Antitoxic function of the liver in patients with infectious nonspecific polyarthritis. Vrach. delo no.11:128-129 N '61. (MIRA 14:11)

1. Revmatologicheskaya klinika (zav. - M.S.Belen'kiy) Ukrainskogo instituta kurortologii i fizioterapii.
(ARTHRITIS) (LIVER--DISEASES)

DZIUBINSKI, Stanislaw, mgr inz.; ZAREMBA, Tadeusz, inz.; MALENTOWICZ, Ryszard, mgr inz.

Modernization of the Sp-60 type linear heater and its use for heating skin plates of freight car doors. Przegl spaw 16 no.10: 235-238 O '64.

1. Welding Institute, Gliwice (for Dziubinski, Zaremba). 2. Zastal Works, Zielona Gora (for Malentowicz).

DZESTELOV, K.S.; ZAREMBO, V.N.; RUBAYEV, Yu.V., red.

[Machine for the pouring of zinc] Mashina dlia rozliva tsinka. Ordzhonikidze, Sovet nar. khoz. Severo-Osetinskogo ekon. administrativnogo raiona, 1961. 25 p. (MIRA 17:10)

ZARUMBO, Ye.G., inzh.

Service life of springs made form 55S2 steel. Vest TSNII MPS 21 no. 4:51-53 '62. (MIRA 15:6)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.
(Car springs) (Steel—Fatigue)

ZAREMB), Ye.G., inzh.

Effect of decarbonization on the lasting properties of springs.
Trudy MIIT no.160:107-110 '62. (MIRA 16:2)
(Springs (Mechanism)--Testing)

BERLIN, V.I., kand.tekhn.nauk; ZAREMBO, Ye.G., inzh.

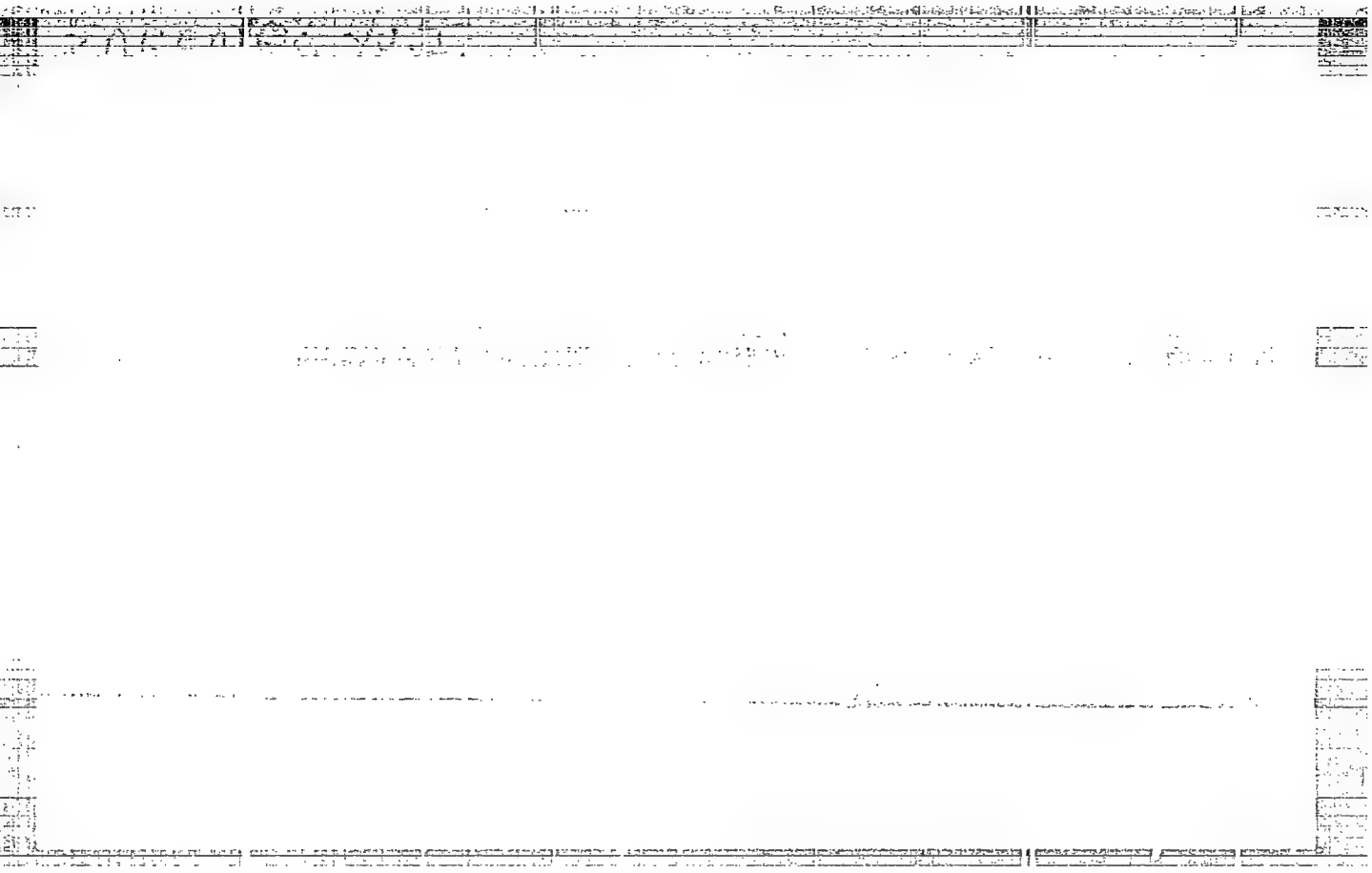
Heat treatment system for the 55S2 spring steel. Trudy MIIT no.160:31-40 '62. (MIRA 16:2)
(Steel—Heat treatment)

ZARENBO, Ye.G., inzh.

Effect of high-temperature annealing on the structure and mechanical properties of the 55S2 spring steel. Trudy MIIT no.160:41-56 '62. (MIRA 16:2)
(Springs(Mechanism)--Testing) (Steel--Heat treatment)

ZAREMBO, Ye.G., kand. tekhn. nauk; ZAKHAROV, B.V., inzh.; KORNEYEV, A.A., inzh.

Analyzing the causes of a premature breakdown of the differential of running gear of the E-302 excavator. Stroi. i dor. mash. 10 no.10:20-21 O '65. (MIRA 18:10)



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963820007-5"

AUTHOR: Silina, G.F., Zarembo, Yu.I. and Kaplan, G.E. 288

TITLE: Modern methods in beryllium technology (Sovremennye metody tekhnologii berilliya.)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals), 1957, No. 1, pp. 66 - 71, (U.S.S.R.)

ABSTRACT: This is a review of recent developments in the metallurgy of beryllium, especially in connection with atomic energy. The work discussed is almost entirely non-Russian; Russian work considered is that reported at the Geneva Conference on the peaceful uses of atomic energy, 1955. It is suggested that in the U.S.S.R. future work on beryllium production should be directed to improving the yield, automation of process operation, development of new and cheaper methods of obtaining beryllium compounds and the pure metal and the utilisation of low-grade (less than 10% BeO) concentrates.

There are 14 references, of which 1 is Russian.

AUTHORS: Kaplan, G. Ye., Zarembo, Yu. I., Uspenskaya, T. A.

SOV/89-5-2-8/36

TITLE: The Present Stage of the Production and Consumption of Thorium (Sovremennoye sostoyaniye proizvodstva i potrebleniya toriya)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 2, pp. 147-154 (USSR)

ABSTRACT: On the basis of foreign publications the perspectives offering themselves for thorium in atomic industry are discussed. Within the last few years a number of plants was established in the USA, India, Brazil and other countries, which work thorium-containing ores. The separation of thorium and rare earths from monazite was carried out mainly by means of the alkaline processes. The extraction process is applied for the production of pure thorium compounds. Metallic thorium is obtained by the thermal as well as by the electrolytical method, namely from chlorine-fluorine or pure fluorine baths. Compact metallic thorium is obtained by means of the powder-metallurgical method or by the melting method. There are 40 references, 13 of which are Soviet.

Card 1/2

PHASE I BOOK EXPLOITATION SOV/5022

Silina, G.F., Yu. I. Zarembo, and L.E. Bertina

Berilliy; khimicheskaya tekhnologiya i metallurgiya (Beryllium; Chemical Technology and Metallurgy) Moscow, Atomizdat, 1960. 119 p. 4,000 copies printed.

Ed. (Title page): Viktor I. Spitsyn; Ed.: A.F. Alyabyev; Tech. Ed.: N.A. Vlasova.

PURPOSE: This book is intended for metallurgists, physicists, chemists and other persons who may be interested in the production, properties, and use of beryllium and its compounds.

COVERAGE: The book gives a critical review of literature published in the last fifteen years on the physicochemical, nuclear, mechanical, corrosion, and chemical properties of beryllium. It describes the industrial processes of producing beryllium and its compounds on the basis of non-Soviet and Soviet literature published up to 1959. Chapters I and II were written by Yu.I. Zarembo; Chapter III, by Viktor I. Spitsyn (Editor), G.F. Silina, and L.E. Bertina; Chapter IV, by G.F. Silina; and Chapter V, jointly by Zarembo and Silina. No personalities are mentioned. The book is based mainly on Western sources. There are 261 references, of which 67 are Soviet.

Card ~~1/3~~

PHASE I BOOK EXPLOITATION SOV/5017

Kaplan, G. Ye., T. A. Uspenskaya, Yu. I. Zarembo, and I. V. Chirkov

Toriy, yego syr'yevyye resursy, khimiya i tekhnologiya (Thorium, Its Raw Material Resources, Chemistry and Technology) Moscow, Atomizdat, 1960. 223 p. Errata slip inserted. 4,000 copies printed.

Ed.: Ye. I. Panasenkova; Tech. Ed.: N. A. Vlasova.

PURPOSE: This book is intended for chemists, physicists, and researchers in the field of atomic energy.

COVERAGE: This is a review of Soviet and other literature on thorium published in the past 15-20 years. The material contains data on the main characteristics of thorium geochemistry and mineralogy and on the current raw material base of thorium outside the Soviet Union. It covers the physicochemical, corrosion-resisting, and radioactive properties of thorium, including its fields of application. The production technology for commercial and technically pure thorium is described along with its basic compounds and alloys. Brief information on the analytical chemistry of thorium is also included. The problems concerning the fuel cycle

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Thorium, Its Raw Material Resources (Cont.) SOV/5017

schemes for U^{233}, the properties of irradiated thorium, and its processing technology will be dealt with in another book. Ch. II. was written by I. V. Chirkov, and the other chapters by G. Ye. Kaplan, Yu. I. Zarembo, and T. A. Uspenskaya. References accompany each chapter.

TABLE OF CONTENTS:

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B102/B201

15.2630

AUTHOR: Zarembo, Yu. I.

TITLE: Thermodynamic reduction of thorium dioxide by calcium

PERIODICAL: Atomnaya energiya, v. 11, no. 2, 1961, 185-186

TEXT: Initial thermodynamic data for the calculation of ΔZ_T^o and log K of thorium dioxide reduction by calcium are offered in Table 1. The results, calculated in the form of equations of the change of the isobaric-isothermal reaction potential, are given in Table 2. The graph illustrates the temperature dependence of ΔZ^o, log K, and P_{Ca}. Results of the thermodynamic calculation show that at 1000-1100°K (optimum temperature of thermal reduction by calcium) the reaction of thorium and calcium oxide formation is practically complete, since the equilibrium pressure of calcium vapors at these temperatures is very low. A reduction of thorium dioxide by calcium is then possible only at temperatures below 1760°K (boiling point of calcium). [Abstracter's note: Complete translation.] There are 1 figure, 2 tables, and 2 non-Soviet-bloc references. The two references to English-language

Card 1/5

Thermodynamic reduction of thorium ...

publications read as follows: Ref. 1. O. Kubaschewski, E. Evans. Metallurgical Thermochemistry. London - New York, Pergamon Press, 1958. Ref. 2. A. Glassner. The thermochemical properties of the oxides, fluorides, and chlorides to 2500°K. AN2-5750 и AEC-USA 1958.

SUBMITTED: February 13, 1961

Table 1: Initial thermodynamic quantities.
Legend: (1) substance; (2) equation for the specific heat; (3) temperature range in °K; (4) $-\Delta H^{\circ}_{298}$ in kcal/mole; (5) ΔS°_{298} in cal/mole·deg; (6) conversion; (7) mode of conversion; (8) temperature in °K; (9) enthalpy, kcal/mole; (10) change of entropy (calculated by the formula $\Delta S_{tr} = \Delta H_{tr}/T_{tr}$), cal/mole·deg; (11) literature.

Card 2/5

ZAREMBO-VLADYCHANSKIY, N.N.

Calculating the crack resistance of a prestressed reinforced concrete element of annular cross section. Gidrotekhnika no.1:5-13 '61. (MIRA 15:3)

(Prestressed concrete—Testing)